

Crossing Paths



WITH WILDLIFE IN WASHINGTON TOWNS AND CITIES

Fall 2000

A New Age of Wildlife Watching

By Jeff Koenings, WDFW Director

Backyard Wildlife Sanctuary managers have long known the joys of watching birds at feeding stations or nestlings fledging in the spring. But many other Washingtonians may not know what they're missing – at least until now.

The new age of wildlife watching includes bringing wildlife to people via the Internet. That's what we are starting to do on the Washington Department of Fish and Wildlife's (WDFW) website through our new WildWatchCam program. We began last spring with a video camera set up on a bald eagle nest near Kent, with a live transmission to our website. Since the eaglets have fledged, our cameras are now trained on a maternal colony of very rare bats north of Spokane. Salmon may be the next stars with an underwater camera set-up. You can read more about this exciting program on page five in this newsletter.

Today's technology allows us to help all kinds of people connect with wildlife. Although there's no substitute for the real thing, this is an important first step. When Internet users can watch a bald eagle hatching from an egg in a nest, I think we raise awareness of all our state's wildlife treasures. The next step may be buying a personalized license plate to support wildlife management programs, or developing a Backyard Wildlife Sanctuary, or joining a local watershed team to protect and enhance fish and wildlife habitat.

Enjoy your front row seats for the live action in your backyards, and check out our WildWatchCam (<http://www.wa.gov/wdfw>) to see some very special species!

Provide for wildlife but protect your home from wildfire

This year's record-setting wildfires across the west have left many property owners wondering if you can both provide for wildlife, with lots of natural vegetation, and protect your homes.

The short answer is "yes." But there are many conditions to consider and steps to take before you can maintain what fire fighters call a "defensible space" around your home.

First of all, keep in mind that Washington is part of a fire-based ecosystem. Wildfire always has been and always will be a natural part of our ecological history. You need to view wildfire the same way Midwesterners view tornados, and prepare accordingly.



Two types of wildfires are important to homeowners. Surface fires burn litter and plants, shrubs and small trees and happen naturally every 5-15 years. Crown fires are more destructive, moving through the canopy of a stand of trees, burning from tree crown to tree crown. Historically crown fires did not occur as frequently since surface fires prevented fuels from accumulating, making it harder for flames to reach the crown layer. But with years of fire suppression and debris accumulation, crown fires are more likely now.

To create that "defensible space" around your home, plant and maintain vegetation in concentric zones within 100-150 feet around structures, with transition areas between zones to slow advancing flames. The first zone, within at least 10 feet of your house, should be in moist, trim, low-growing plants like mowed lawn, perennials, groundcovers and annuals. Keep this zone well-watered and free of dry litter. The second zone should be low, sparse, drought-tolerant shrubs and groundcovers. Many native plant species work well here. The third zone can include thinned trees or shrubs where ground debris is removed and overgrowth trimmed regularly. The fourth zone,

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Crossing Paths is a twice-yearly newsletter for Washington residents enrolled in the Backyard Wildlife Sanctuary Program.

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Who's That?

LBBs always bring out the “Who’s That?” question among backyard birders.

“Little Brown Birds” tend to be **sparrows**, the plain-colored members of the Emberizidae family that includes buntings, juncos, longspurs, and towhees. Family characteristics include bills adapted for seed-eating and short wings.

“Sparrow” comes initially from the Indo-European word “sper,” meaning “flutter,” and then to the Anglo-Saxon “spearwa,” meaning any “small fluttering bird.” Most sparrows are relatively small, about six inches or less in size. Because many sparrows nest in low brush and forage on and near the ground, and because young develop rapidly and often leave the nest before they’re able to fly, they’re especially vulnerable to predation by cats.

There are at least 16 species of sparrows that make Washington home at some time in their lives. Half-a- dozen are common year-round residents or winter migrants of either western or eastern Washington, or both. None of them come in large flocks to winter feeding stations but are more likely seen individually.

Unfortunately the most common “sparrow” at winter feeders isn’t a true sparrow at all, but an introduced bird from the family Passeridae. That’s the House or English sparrow, a chunky, large, aggressive bird seen in large numbers, especially in urban areas.

The **Song sparrow** (*Melospiza melodia*) may be our most common true sparrow, but possibly unidentified by many. A year-round resident of both sides of the Cascades, this is the quintessential “Little Brown Bird,” with its brown streaked breast and sides, sometimes-seen



Song sparrow

dark breast spot, brown head, and at least 25 obscure subspecies plumage variations across the country. But that’s where the plainness ends. Its musical repertoire is incredible with most songs starting with the first four notes of Beethoven’s Fifth Symphony. Song sparrows come to winter feeding stations for millet, cracked corn, and sometimes suet.

Two species that are often seen at winter feeders on both sides of the state are the **White-crowned sparrow** (*Zonotrichia leucophrys*) and the **Golden-crowned sparrow** (*Zonotrichia atricapilla*).

The White-crowned sparrow is easily distinguished, at least in adult form, by black and white striping on the head. It has an unstreaked grayish breast and a wheezy whistle, husky trill or loud “pink” call. Several sub-species have been identified, including a mountain and Puget Sound variety, with very subtle plumage differences. White-crowns breed and nest as far north as the Arctic tundra. They migrate through Washington or even spend the winter here, often seen at backyard feeding stations in suburbia.

The Golden-crowned sparrow is similar, but instead of the white head stripes it has a dull golden-yellow cap heavily bordered with black. Sometimes it is confused with an immature white-crown, which is browner with buff striping. Golden-crowns breed in Alaska and Canada and usually spend winters in Washington and further south. It is less common east of the Cascades in the winter, more often seen there in the fall or spring migration.

The **White-throated sparrow** (*Zonotrichia albicollis*) is much more rare and is usually just a winter visitor in eastern Washington. It has black and white head stripes similar to the white-crown, but it has a distinctive white throat patch and a less conspicuous yellow spot between the bill and eye. Although chances of hearing its song are slight in winter, this sparrow has a beautiful series of whistles and clear notes of different pitch.

The **Fox sparrow** (*Passerella iliaca*) is often seen at westside winter feeders and breeds throughout the state. It has a rusty-



White-throated sparrow

reddish hue from head to tail and a heavily streaked breast, although there are many subspecies with variations. Nearly seven inches in length, this is one of the larger sparrows and is sometimes confused with the Hermit thrush; with its sometimes-seen dark breast spot, it is also confused with the song sparrow. It usually forages on the ground by scratching in leaves and flinging them in its wake – a habit that sends seeds flying from feeding platforms.

The **American tree sparrow** (*Spizella arborea*) is identified by a dark spot on an unstreaked breast and a solid red-brown cap. Sometimes called the “Winter Chippy,” it is similar in coloration to the Chipping sparrow but is a winter visitor to eastern Washington and a year-round resident of the coast, (rather than a summer resident only.) It tends to nest in thickets and trees more than other sparrows and will come to winter feeders for suet and peanut butter.



American tree sparrow

Artwork provided by Field Guide to the Birds of North America (National Geographic Society)

Start counting in November

WDFW's 8th annual backyard winter bird feeding survey starts in November, with veteran counters soon to receive forms in the mail.

Data are used for songbird tracking and management across the state.

If you'd like to help with this fun count of birds, just mail us a postcard with your name and address to Winter Backyard Bird Survey, WDFW, 16018 Mill Creek Blvd., Mill Creek, WA 98012; or send e-mail to thomppat@dfw.wa.gov.

It's a simple process: just watch your feeders carefully for a couple of days every other week through the season, record numbers by species, and return data forms to us in the spring.

BWS Directory continues to grow

In response to requests by Backyard Wildlife Sanctuary (BWS) members for information on the whereabouts of nearby state certified sanctuaries, we will be sending out our second edition of the Backyard Wildlife Sanctuary Directory this January.

If you are interested in being added to the Directory, please send us your street address, phone number/email address, and a brief description of your property and how you manage it for wildlife. If you want to change or update your entry, now is the time to do it.

The 2001 directory will be sent only to those listed in it and to members of the BWS program who request a copy. Those requesting a copy should send us a stamped, self-addressed envelope.

Send all requests and entries for the 2001 Directory to: WDFW-Sanctuary Program, 16018 Mill Creek Blvd., Mill Creek, WA 98012. New entries can also be emailed to linkrel@dfw.wa.gov. To save paper we can also send excerpts from the 2001 Directory as an attachment.



If only it were that easy...

Did you hear about the folks who called the Department of Transportation to request removal of the "Deer Crossing" sign on their road? They said that too many deer were being hit by cars and they no longer wanted them to cross there.

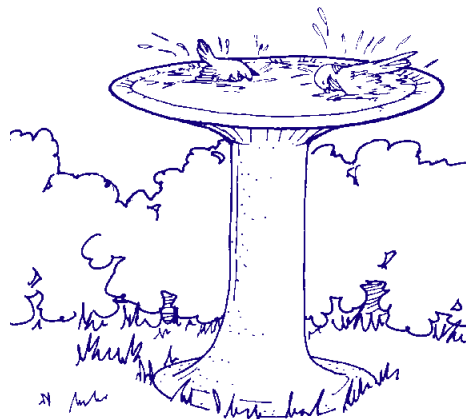
Rather be on the Internet?

If you'd prefer to help WDFW save printing and postage costs of this newsletter by picking it up off the Internet website (www.wa.gov/wdfw) please let us know by dropping us a line to remove your name from our mailing list. You'll find "Crossing Paths" under the "Wildlife Viewing" section of the website.

Seasonal Tip:

Pull the plug during deep freeze

If this winter puts us in a record deep freeze, consider pulling the plug on your birdbath heater.



During extended below-freezing temperatures, birds that use open water baths sometimes get iced up. Birds have been known to shun heated birdbaths during extreme cold, but not always. If temperatures remain in the lower teens for days, pull the plug on the heater. In that kind of weather, birds will still get moisture from snow, if available.

Spokane volunteers needed

A Backyard Wildlife Sanctuary demonstration plot on the Spokane County Conservation District (SCCD) office grounds needs maintenance volunteers.

This site, at N. 210 Havana St. (just south of the fairgrounds), is the home of the "Green Zone," a team of public and private organizations and individuals working to enhance a more sustainable, earth-friendly environment. Other demonstration plots are maintained by

the Native Plant Society, Master Gardeners, Master Composters, WSU Cooperative Extension, and others. Indoor Green Zone displays and library are housed in the Extension office next door (N. 222 Havana, the former SCCD office.)

Visit the Green Zone to see what it's all about yourself, and if you'd like to help maintain and enhance the wildlife plot, please contact WDFW's Madonna Luers at 456-4073.

Provide for wildlife but protect your home from wildfire

(continued from page 1)

furthest out from your house, can be your “natural area” with selectively thinned trees and shrubs, preferably less fire-prone species.

Property with steep slopes or windswept exposures need greater defense distances. A house at the crest of a hill, with an overhanging wood deck and trees and shrubs close by or below, is at greater risk.

Although all plants will burn if conditions are right, some are more “fire-resistive” than others. These plants naturally have high moisture content, little or no seasonal accumulation of dead vegetation, low volume of total vegetation, non-resinous woody material, open, loose branching, and are drought-tolerant and slow-growing. (See the list of fire-resistive plants, most of which are also good wildlife plants.)

Pyrophytes or “fire-prone” plants that ignite easily or burn intensely should be avoided or minimized, especially close to structures. These plants usually accumulate fine, twiggy, dry material, have leaves or wood with volatile waxes or oils, gummy, resinous sap or leaves with strong odor, loose or papery bark, hair-covered leaves, are blade-leaf or needle-leaf evergreens, or flame (not smolder) when ignited. Junipers and cheatgrass are examples of pyrophytes.

Landscape maintenance for wildfire prevention is different from that for wildlife habitat, but you can compromise by using your zones. To maintain your fire defensible space, you must regularly water, mow, rake, trim, prune, and remove accumulated plant debris – the very stuff that some wildlife species thrive on. Emphasize this kind of maintenance in the first few zones closest to your home. Leave your brush piles, understory duff, snags, and other “fuzzy” features of your wildlife sanctuary to the natural area furthest from your home.

Even in your natural area, however, you should reduce or eliminate “ladder fuel” configurations, or vegetation communities structured like the rungs of a ladder – leaves, grasses, small shrubs, brush piles, snags, and trees – to minimize the development of destructive crown fires. Reduce surface fires from climbing into tree crowns by pruning the base of the crown six to 15 feet from the ground.

Reduce lateral movement of fire by trimming branches that span between crowns to ten feet or more apart.

As you can see, fire really is a natural part of our ecosystem because a vegetative community’s natural way of growing is very fire conducive!

Fire Resistive Plants

Keeping mind that there is no such thing as a truly fire-resistant plant, the following are some species that are less fire prone than others. It is by no means an all-inclusive list.

Groundcovers

Stone crops (*Sedum* spp.)
Dusty miller (*Senecio cineraria*)
Verbenia (*Verbenia bipinnatifida*)
Bearberry cotoneaster (*Cotoneaster dammeri*)
Kinnikinnick (*Arctostaphylos uva-ursi*)
Carpet bugle (*Ajuga reptans*)
Snow in summer (*Cerastium tomentosum*)
Winter creeper (*Euonymus fortunei* “Coloratus”)
Spring cinquefoil (*Potentilla tabernaemontanii*)
Sea pink (*Armeria maritima*)
Mother of thyme (*Thymus praecox arcticus*)
Wooly yarrow (*Achillea tomentosa*)

Vines

Trumpet vine (*Campsis radicans*)
Virginia creeper (*Parthenocissus quinquefolia*)
Grapes (*Vitis* spp.)
Wisteria (*Wisteria* spp.)

Trees

Western red cedar (*Thuja plicata*)
Maple (*Acer* spp.)
Horsechestnuts and buckeyes (*Aesculus* spp.)
Alder (*Alnus* spp.)
Northern catalpa (*Catalpa speciosa*)
Flowering dogwood (*Cornus florida*)
Beech (*Fagus* spp.)
Ash (*Fraxinus* spp.)
Honeylocust (*Gleditsia tricanthos*)
Aspen and cottonwood (*Populus* spp.)
Oak (*Quercus* spp.)
Black locust (*Robinia pseudoacacia*)
Willow (*Salix* spp.)



Yarrow



Daylily

Perennials

Yarrow (*Achillea* spp.)
Chives (*Allium schoenoprasum*)
Bergenia (*Bergenia* spp.)
Lilies (*Lilium* spp.)
Sedges (*Carex* spp.)
Coreopsis (*Coreopsis* spp.)
California poppy (*Eschscholzia* spp.)
Wild strawberries (*Fragaria* spp.)
Geranium (*Geranium* spp.)
Daylilies (*Hemerocallis* hybrids)
Coral bells (*Heuchera* spp.)
Iris (*Iris* spp.)
Lupine (*Lupinus* spp.)
Evening primrose (*Oenothera* spp.)
Penstemon (*Penstemon* spp.)
Goldenrod (*Solidago* spp.)



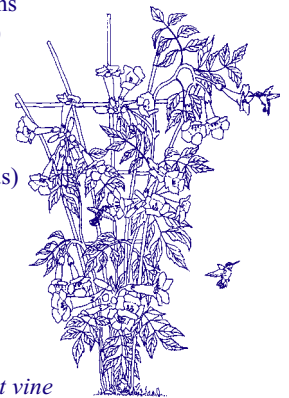
Lupine



Iris

Shrubs

Serviceberry (*Amelanchier* spp.)
Butterfly bush (*Buddleia davidi*)
Yucca (*Yucca* spp.)
Red-osier dogwood (*Cornus sericea*)
Cotoneaster (*Cotoneaster* spp.)
Oregon-grapes (*Mahonia* spp.)
Mountain boxwood (*Pachistima canbyi*)
Mock Orange (*Philadelphus* spp.)
Cherry (*Prunus* spp.)
Buckthorn (*Rhamnus fragula*)
Azaleas, Rhododendrons
(*Rhododendron* spp.)
Currant (*Ribes* spp.)
Silver buffaloberry
(*Shepherdia argentea*)
Snowberry
(*Symphoricarpos albus*)
Cranberry bush
(*Viburnum trilobum*)



Trumpet vine

Watching Washington's wildlife on the *Internet*



Ever wonder how folks who DON'T have a Backyard Wildlife Sanctuary watch wildlife from their easy chairs at home?

Ever think it would be over a computer screen via the Internet and the World Wide Web?

Believe it or not, with live videocameras and website transmissions, that's the way the Washington Department of Fish and Wildlife (WDFW) is now helping people view wildlife at (www.wa.gov/wdfw).

The "WildWatchCam" program started last February with a camera set-up on a bald eagle nest in a tree on private property near Kent in northwest Washington. WDFW's Watchable Wildlife program biologist Chuck Gibilisco enlisted the help of Timothy K. Brown, a wildlife and special camera technology expert, and electronics and optical firm B.E. Meyers.

Videotapes of a returning pair of eagles were made, providing an unobtrusive way for biologists to learn more about the private lives of the species. The eagles had been incubating two eggs when the video transmission to WDFW's Internet website went on line May 5; on May 7 the first hatchling emerged from an egg and on the 10th the second hatched.

The Internet website transmission of the image refreshed every five seconds,



providing an almost live, moving picture of the birds' activities. More than 6,000 "log-ons" were made to "EagleCam" each day by persons fascinated with the opportunity to watch an eagle family grow.

The parent eagles dutifully fed their offspring, which doubled in size within two weeks. They averaged three fish and two crows per day. By mid to late June the eaglets were doing a lot of wing-flapping and the parent birds were building the sides of the nest up to keep them from falling out. Over the course of the summer, the videocamera recorded a chickadee landing on an eaglet's head, a squirrel from the "basement" of the nest scrambling into the nest (and out very quickly!), hummingbirds checking out the arrangement, and many other happenings. First flight came on July 31 when one of the eaglets accidentally slipped out of the nest and glided to a lower branch of the tree; by early August both youngsters were fledging.

"EagleCam" came to an end this season when one of the eaglets knocked the camera out of position in mid-August. Coincidentally, that was about the time WDFW was ready to debut its next "Wild Watch Cam" with equipment set up on a colony of very rare bats near Spokane by urban wildlife biologist Howard Ferguson.

"BatCam" is a live picture of a maternal colony of 125 to 150 Townsend's big eared bats on the ceiling of an old cabin on private property in north Spokane County. The website picture, refreshed every 15 seconds, is not as clear as WDFW biologists had planned for this first year of the effort. But videotapes being recorded from the same camera are providing WDFW and an Eastern Washington University graduate student some excellent new information about the very rare species of bat.

The Internet connection, again made possible with the help of Brown and B.E. Meyers, is actually a bonus of the research. Only 12 maternity roosts (where adult females give birth and rear their young) of the species are known in Washington, only two on the eastside,



and biologists need to know more to better protect them.

Ferguson found the bat colony last year while bird watching in the area. He contacted the owners of the property and learned that they were planning to remodel the structure, which would have excluded the bats. They agreed to hold off on their plans if an alternative for their needs could be found. With the help of Bats Northwest, Bat Conservation International (BCI), the National Fish and Wildlife Federation (NFWF), and Washington state's Aquatic Lands Enhancement Account (ALEA), grants were secured to provide the landowners with another building to leave the bat cabin undisturbed.

At this writing, the bats had not yet migrated south and were still "on line" through "BatCam." WDFW's next "WildWatchCams" will feature salmon and seals. "SalmonCam" will provide an underwater view of coho salmon returning to WDFW's Issaquah Fish Hatchery. "SealCam" will be set up on a seal haul-out site in Puget Sound.

"We're learning a lot about wildlife behavior and about working with cutting-edge technology and equipment," says Gibilisco. "But surprisingly, we're learning just as much about people. We continue to marvel at the incredibly supportive feedback that we and the eagle nest site landowners received from people from all over the state and country. Many of them really got hooked on watching and e-mailed lots of questions and comments. We also received many needed financial contributions and purchases of personalized license plates – the two sources of funding that make WildWatchCam possible."

Urban waterfowl watching is a great wintertime pick-me-up

Winter can be somewhat of a letdown for wildlife watchers after the frenzy of spring and summer activity. Many species head to warmer weather, leaving us stuck behind under cloudy skies, drizzly days, and snow.

But winter can be a wildlife-watching bonanza, and not just at your backyard feeders. Colorful waterfowl, in numbers that are off the survey charts of most backyard winter feeding stations, are viewable not far from home for most of us in the dead of winter.

Washington is part of the Pacific Flyway, a migratory corridor for many species including ducks and geese. Beginning in late summer, several thousand waterfowl begin their southern migration from breeding grounds in Alaska and northern Canada. As these



species migrate southwards to warmer wintering grounds, they stop over at the various water bodies located along the flyway. Many of these sites are located in and around the urban areas of Washington; on the westside, they include Mercer Slough in Seattle, Snake Lake in Tacoma, Nisqually Refuge near Olympia, Padilla and Skagit bays near Anacortes, and Shillapoo Lake near Vancouver; on the eastside, they include the Yakima River Delta near Richland, McNary Refuge near Pasco, and the Columbia Refuge near Moses Lake.

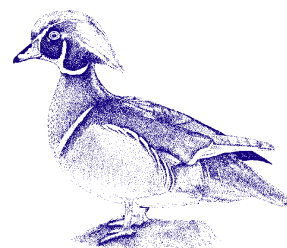
The best time to view large concentrations of waterfowl in Washington is in January. Species most commonly seen include mallard, gadwall, American widgeon, green-winged teal, northern shoveler, canvasback, northern pintail, scaup, ring-necked duck, goldeneye, bufflehead, ruddy duck, surf scoter, merganser, snow geese, Canada geese and American coot. Fewer numbers of blue-winged teal, cinnamon teal, Eurasian widgeon, wood duck, redhead, eider, oldsquaw, Harlequin duck, brant, tundra swan, and trumpeter swan may also be seen.

Wood duck nest box booklet available

If you have wooded property on or near a small body of water and want to attract wood ducks, you'll want to pick up a copy of a new, free booklet on wood duck nest boxes from WDFW regional and headquarters offices.

"Guidelines for Managing Wood Duck Nest Boxes in Washington State" was written for WDFW by wildlife biologist Paul C. Fielder, made possible with funding from the Washington Migratory Bird Stamp Program, the North American Waterfowl Management Plan and the Washington Waterfowl Association.

The 41-page, color-photo booklet covers wood duck biology and habitat needs, nest box plans and placement advice, and nest box maintenance.



Wildlife loves those Oregon-grapes of Washington

Washington state's "Oregon-grapes" include some of the most attractive native evergreen shrubs and groundcovers for wildlife landscapes. All are easy to grow, nice looking all year, and provide wildlife with valuable food and cover.

All the Oregon-grapes have bright yellow flowers in spring followed by attractive blue-black, grape-like fruit in summer. Parts of their spiny-edged, thick holly-like foliage may turn purplish or fiery red in winter.

The quarter-inch in diameter berries ripen in late summer and are eaten by many birds including grouse, pheasants, robins, waxwings, juncos, sparrows, and towhees. Foxes, raccoons, and coyotes also eat the berries. Deer and elk will occasionally browse the leaves and flowers. Orchard mason bees, various small wasps, painted lady butterflies, and other flying pollinators use the nectar.

None of the Oregon-grapes transplant easily and they are best planted from well-rooted containers into well-drained soil. All are found in nurseries and all but one species can be grown throughout the state.

Oregon-grapes or "*Mahonias*," as the genus is named, are related to *Berberis* (Barberry) and are sometimes described under that name.

The **tall Oregon-grape** (*Mahonia aquifolium*) is Oregon's state flower. This upright-growing shrub grows from 6 to 8 feet tall and spreads to 6 feet wide, or wider. In hot, sunny sites it grows best with some summer water but in other situations it can grow in quite dry soil after a summer with supplemental watering. The plant's erect form makes it an excellent barrier and informal screen plant when mass-planted. The dwarf selection, **dwarf Oregon-grape** (*Mahonia aquifolium* 'Compacta') grows

only 2-feet tall.

The **creeping Oregon-grape** (*Mahonia repens*) grows from 18 to 36 inches tall and wide. It grows naturally in full sun and partial shade east of the Cascade Mountains. It creeps out fairly slowly from underground stems and is a great groundcover for grouping under large shrubs and trees.

The **Cascade Oregon-grape** (*Mahonia nervosa*) is best suited for landscapes west of the Cascades Mountains. It grows from 12 to 24 inches tall and spreads slowly from underground stems. It's a very desirable landscape plant for growing in filtered shade of trees and shrubs in moist or dry soil. Well-established plants create the impression of stiff, leathery ferns. Plant in large groups with other natives such as sword fern and salal or at a smaller scale with wild woodland strawberries and other woodland plants.

What can we learn from wildlife adaptations to winter?

(excerpted in part from King County Parks' "County Tracks")

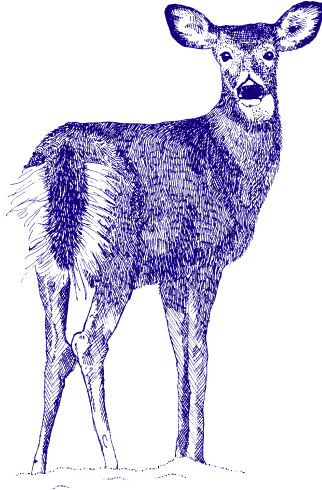
Winter is a tough season in Washington, whether you're on the very wet and flood-prone westside or the very snowy and cold eastside.

Our resident wildlife obviously adapts to the challenges of winter weather, and we might learn something from them to better enjoy the season ourselves.

Birds and mammals either avoid winter by migrating or hibernating, or they stay active in winter by adapting to the conditions.

Some wildlife, such as elk and deer, migrate altitudinally, or up and down a mountainside. They live higher up in elevation in the summer where there is a good food source, and move down in elevation in the winter where there is less severe weather and continuing food sources. Other wildlife migrate longitudinally, or north and south. In the Northern Hemisphere, many birds move north in the spring to find more abundant food sources and space to raise young, then fly south in the fall to avoid severe winter weather and a diminished food supply.

Some true hibernators, such as chipmunks or marmots, may dramatically lower their body temperature, respiration



and heart beat and live off their stored body fat. Black bears will enter into a state of deep sleep, winter dormancy, or "torpor." They will dig a den and sleep for varied lengths of time depending on snow cover. Torpor does not bring on the dramatic changes of hibernation. Bears can move around in their den, venture outside for a short time, and even give birth and nurse newborns while in torpor.

Some winter-active animals will change their fur or feather colors to blend into their surroundings. This is important for a prey species, like the ptarmigan, to avoid capture, and for a predator species, like the long-tailed weasel, to be stealthy; both turn white in their snowy environment.

Red squirrels will cache or store food for use throughout the winter. If you observe a large mound of conifer cones while hiking a forest, you've probably discovered a squirrel midden or cache for winter use.

In areas with regular snow cover, white-footed deer mice and voles remain active under the snow, using it as an insulating blanket.

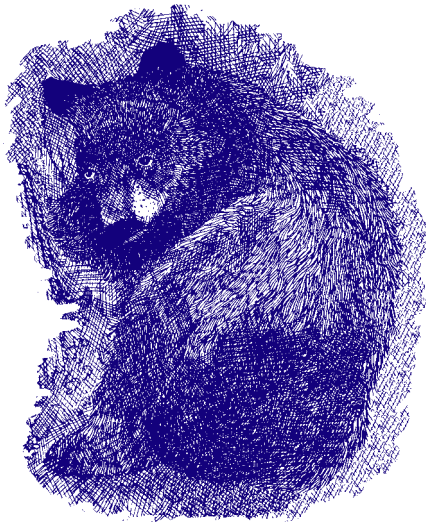
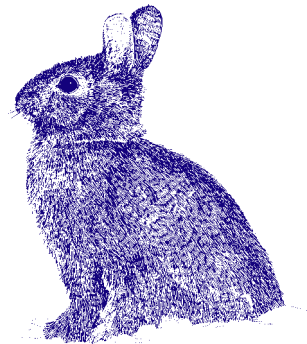
Large mammals grow more fur along their flanks and back. The hollow guard hairs trap air and help to reduce temperature loss. These same animals will also add more layers of fat to their bodies to insulate against the cold and provide a source of energy if food becomes scarce. Many ungulates (hoofed

mammals) lower their metabolism in the winter to conserve energy. Because of this, it is important not to disturb resting deer and elk in the winter.

The Black-capped chickadee actually grows more feathers in winter to stay warm. Fluffing their feathers adds air and increases insulation, like a down comforter, during those chilly dark nights of winter. They roost together as a group for longer hours with severe cold weather. In laboratory tests, chickadees have been shown to lower their body temperatures by 18-20 degrees into a hypothermic state, and then recover, thus saving energy.

Adaptation is defined as any trait (behavioral or physiological) that allows an animal to live successfully in its environment. Wildlife has learned to adapt to winter conditions over many thousands of years. These animals have learned to live with their environment, rather than attempting to change it to fit their needs – a lesson we could all take to heart.

Since most of us can't avoid winter by migrating out of Washington for the whole season (or going into a deep sleep for months!), try some adaptations yourself. Make an effort this winter to explore the outdoors of your own sanctuary and beyond by adapting to the conditions. Invest in good raingear and other winter wear and dress in layers; try snowshoeing or cross-country skiing to move more easily in snow and to keep active; and take along lots of high-calorie snacks and warm liquids to enjoy the season!



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WITH WILDLIFE IN WASHINGTON TOWNS AND CITIES

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Eastside: N. 8702 Division St.,
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The department receives Federal Aid for fish and wildlife restoration.

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◆ ◆ ◆ *Personalized Plates Help Wildlife* ◆ ◆ ◆



The Backyard Wildlife Sanctuary program, along with other non-game functions of the Washington Department of Fish and Wildlife (WDFW), is funded by the sale of Washington state personalized motor vehicle license plates. These distinctive plates — in your choice of unclaimed word(s) up to seven letters — cost an extra \$46 for the first year and an extra \$30 for each subsequent year. You can pick up an application form at any state licensing or WDFW office, or by contacting the Department of Licensing at P.O. Box 9042, Olympia, WA 98507, 360-902-3770 (telephone menu option #5).